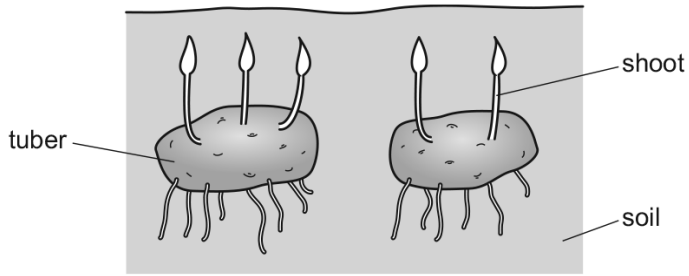
8.4 Translocation

01. 0610_m22_qp_22 Q: 16

The diagram shows some potato tubers. New shoots are beginning to grow.

Sucrose is being translocated from source to sink.



Which statement is correct?

A The tuber is a sink.

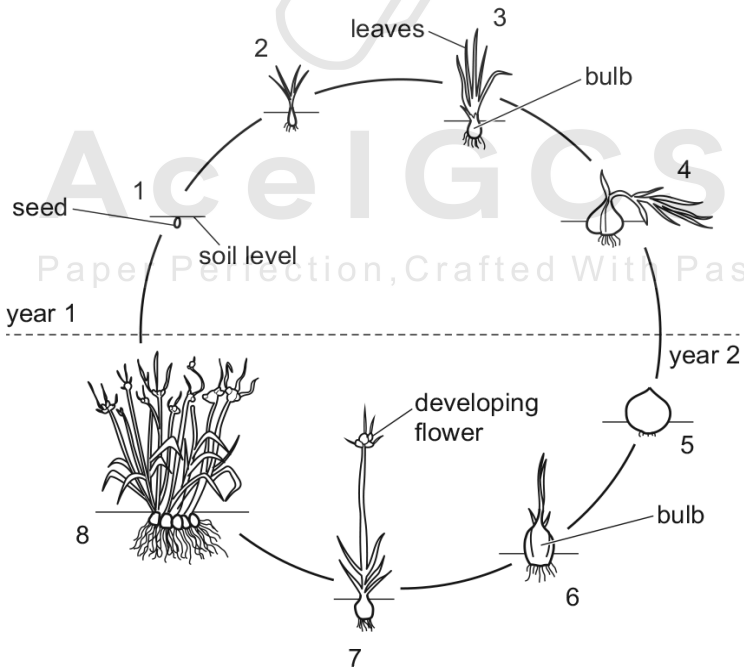
B The soil is a sink.

C The shoots are sources.

D The shoots are sinks.

02. 0610_s21_qp_21 Q: 18

The diagram shows an onion plant that has been grown from a seed. Each onion plant takes two years to flower and produce more seeds.



What is the onion bulb acting as in stage 3 and in stage 6?

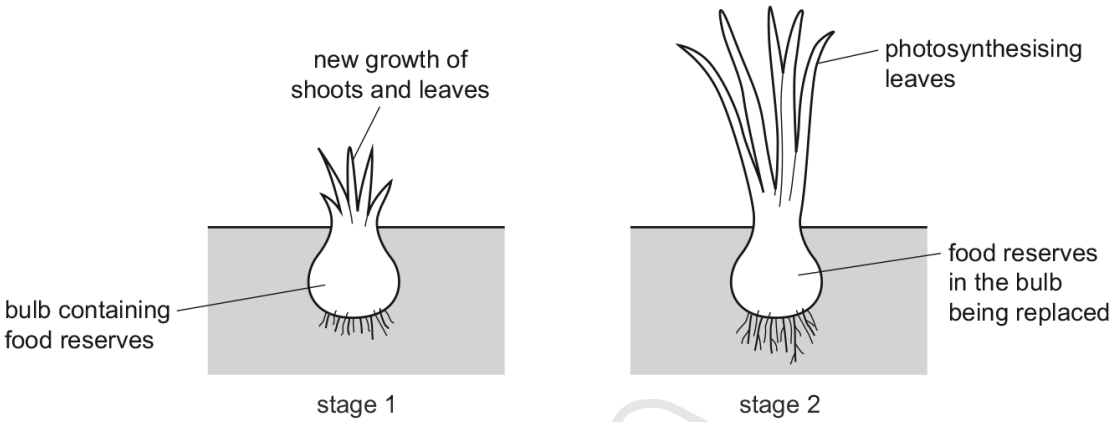
	stage 3	stage 6
A	sink	sink
B	sink	source
C	source	sink
D	source	source

03. 0610_s21_qp_22 Q: 18

The diagram shows a plant at different times of year.

stage 1 At the start of the growing season, the plant uses the food reserves stored in the bulb for the growth of shoots and leaves.

stage 2 Later in the season, the leaves of the plant photosynthesise and the food reserves in the bulb are replaced.

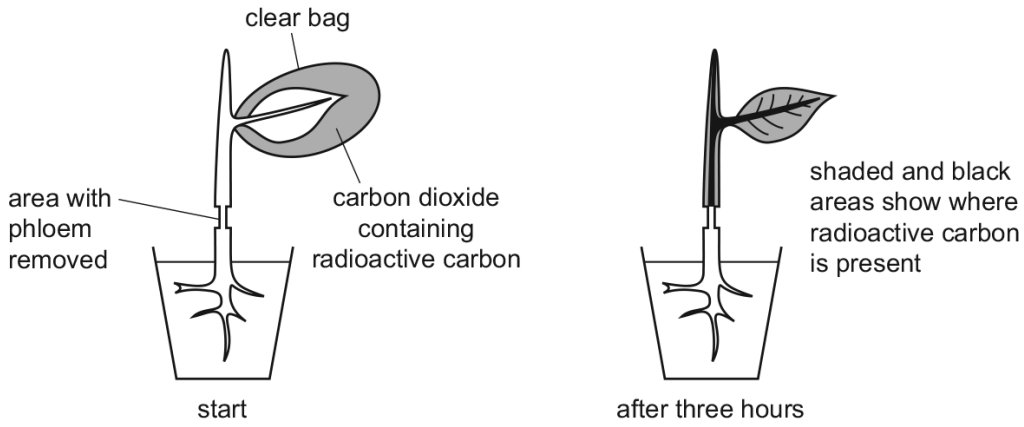


What is the role of the bulb during stage 1 and stage 2?

	stage 1	stage 2
A	sink	sink
B	sink	source
C	source	sink
D	source	source

04. 0610_s21_qp_23 Q: 18

A ring of phloem tissue was removed from the stem of a plant, as shown in the first diagram. Carbon dioxide containing radioactive carbon was supplied to the leaf of the plant. The second diagram shows where radioactive carbon was present after three hours.



Which statements does the experiment support?

1 Translocation of sugar only occurs in one direction.

2 Translocation occurs in the phloem.

3 Translocation requires energy.

A 1 only **B** 1 and 2 **C** 2 only **D** 2 and 3

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05. 0610_w21_qp_22 Q: 17

Translocation is the movement of sucrose and amino acids in the phloem tissue of a plant from source to sink.

Which organ can act as a source?

A flower

B growing shoot tip

C new developing root

D storage root

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06. 0610_w21_qp_23 Q: 17

In plants, how are amino acids moved between sources and sinks?

A by translocation through xylem vessels

B by transpiration through phloem tissues

C by translocation through phloem tissues

D by transpiration through xylem vessels

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07. 0610_s20_qp_22 Q: 16

Dodder is a plant that grows on other plants called the hosts. The dodder plant connects to the host's vascular bundles.

The dodder plant does not have green leaves or roots.

What correctly describes the regions for translocation?

	host leaves	dodder
A	sink	sink
B	sink	source
C	source	sink
D	source	source

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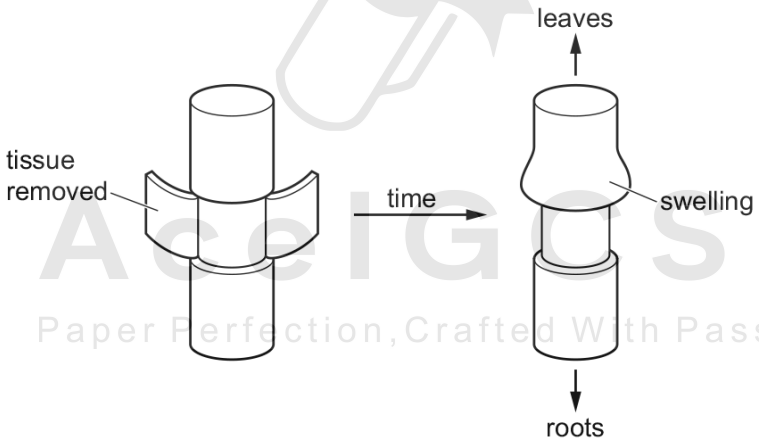
08. 0610_s19_qp_23 Q: 18

Scientists investigate the movement of substances in a plant.

They cut a ring of tissue from the stem.

Removing the tissue removes some of the transport vessels found around the edge of the stem.

A few days later they notice swelling above the area where the tissue has been removed.



What causes the swelling?

A Phloem vessels have been removed and sucrose cannot move to the sink.

B Phloem vessels have been removed and sucrose cannot move to the source.

C Xylem vessels have been removed and minerals cannot move to the sink.

D Xylem vessels have been removed and minerals cannot move to the source.

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09. 0610_w19_qp_21 Q: 16

In plants, what is transported by translocation?

A glucagon

B glycogen

C starch

D sucrose

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10. 0610_w19_qp_22 Q: 16

Which description of translocation is correct?

A movement of glucose and amino acids from a sink to a source

B movement of glucose and amino acids from a source to a sink

C movement of sucrose and amino acids from a sink to a source

D movement of sucrose and amino acids from a source to a sink

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11. 0610_m18_qp_22 Q: 13

During growth, potato plants produce flowers and underground storage organs called tubers.

During this time, which parts of the plant act as sources and sinks for translocation?

	flowers	leaves	potato tubers
A	sink	sink	source
B	sink	source	sink
C	source	sink	source
D	source	source	sink

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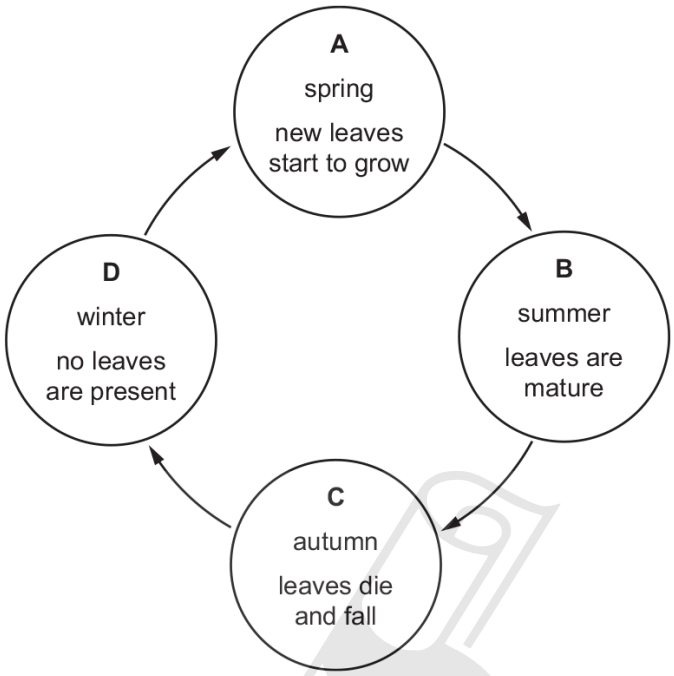
12. 0610_w18_qp_21 Q: 16

Roots and leaves both act as a source and a sink for sucrose and amino acids at different times during the year.

At which point in the year are the roots most active as a source?



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13. 0610_m17_qp_22 Q: 14

Which is a description of translocation?

A movement of amino acids and sucrose from sink to source

B movement of amino acids and sucrose from source to sink

C movement of water down a water potential gradient

D movement of water up a water potential gradient

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14. 0610_w17_qp_22 Q: 15

What is the function of translocation?

A to move leaves towards the light for photosynthesis

B to move water into leaves for photosynthesis

C to transport amino acids for the growth of new leaves

D to transport starch to all parts of a plant

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15. 0610_m16_qp_22 Q: 18

Which process is used to transport sucrose from the leaves of a plant to its flowers?

A diffusion

B osmosis

C translocation

D transpiration

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16. 0610_s16_qp_22 Q: 14

Which process is an example of translocation?

A absorption of water by the roots and its movement through the xylem to the leaves

B loss of water from the leaves as it evaporates into the air

C movement of sucrose from the leaves through phloem to other parts of the plant

D the process by which plants use the food produced by photosynthesis to obtain energy

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17. 0610_w16_qp_21 Q: 17

Which substance is moved by translocation in a flowering plant?

A amino acid

B cellulose

C fat

D starch

SN	Paper	Q. No.	Answer
01	0610_m22_qp_22	16	D
02	0610_s21_qp_21	18	B
03	0610_s21_qp_22	18	C
04	0610_s21_qp_23	18	C
05	0610_w21_qp_22	17	D
06	0610_w21_qp_23	17	C
07	0610_s20_qp_22	16	C
08	0610_s19_qp_23	18	A
09	0610_w19_qp_21	16	D
10	0610_w19_qp_22	16	D
11	0610_m18_qp_22	13	B
12	0610_w18_qp_21	16	A
13	0610_m17_qp_22	14	B
14	0610_w17_qp_22	15	C
15	0610_m16_qp_22	18	C
16	0610_s16_qp_22	14	C
17	0610_w16_qp_21	17	A